

Teaching Elementary Students with Behavior Disorders to Recruit Positive Teacher Attention: Effects on Math Proficiency

Sheila R. Alber, Lara L. Anderson, Christa M. Martin, and Karen J. Moore
The University of Southern Mississippi

Four elementary students with behavior disorders attending a day treatment facility were trained to recruit positive teacher attention. Data on student recruiting and academic productivity were collected across 59 twenty-minute sessions. A multiple baseline across students design demonstrated a functional relationship of recruitment training on the number of appropriate recruiting responses emitted by the students, and on the students' accuracy and completion of math seatwork. After training, all four students increased their appropriate recruiting responses to the target criterion (3 to 5 per session) and decreased their inappropriate recruiting responses to 1 or less per session. Additionally, their accuracy on math assignments increased. This study extends previous recruiting research to elementary students with behavior disorders attending an outpatient facility in Mississippi.

Keywords: emotional/behavior disorders, recruiting reinforcement, self-monitoring, math proficiency.

Students with emotional/behavioral disorders (EBD) frequently emit disruptive behaviors that directly interfere with their ability to learn academic skills. Consequently, they experience high rates of academic failure (Levy & Chard, 2001; Trout, Nordness, Pierce, & Epstein, 2003). In fact, students with EBD are the least likely of all students with and without disabilities to attain school success (Landrum, Tankersley, & Kauffman, 2003). Documented outcomes for these students include high grade retention and drop out rates, high failure rates on courses and competency tests, and poor adjustment to adult life (Blackorby & Wagner, 1996; Frank, Sitlington, & Carson, 1995).

Substandard academic outcomes for students with EBD can be attributed, in part, to the inadequate distribution of instructional time and the poor quality of teacher-student interactions. Persistent disruptive behavior patterns often require teachers to focus more attention on behavior management than on academic instruction. Wehby, Lane, and Falk (2003) documented that in self-contained EBD classrooms, teachers devote only 30% of the school day to academic instruction. This insufficient amount of instructional time is compounded by frequent negative interactions with teachers. Teacher interactions with students with EBD are characterized by low rates of praise, positive statements, and instructional requests; and high rates of reprimands (Sutherland, Adler, & Gunter, 2000; Jack et al., 1996; Wehby, Symons, & Shores, 1995).

This destructive pattern of negative school interactions and poor academic achievement can be reversed by systematically teaching students to recruit positive teacher attention. Teaching students to appropriately recruit feedback and praise serves the dual function of advancing academic performance and increasing positive interactions. Recruitment training typically consists of teaching students to complete a portion of an academic assignment, self-assess for accuracy, signal the teacher appropriately, politely ask for feedback, and self-record recruiting performance. Common training procedures include modeling, role-playing, and performance feedback. The following section describes the recruiting research to date.

Recruiting Research

Systematically teaching students to recruit feedback from adults has demonstrated positive effects for a wide range of learners completing a variety of academic, functional, and vocational tasks. For example, Stokes, Fowler, and Baer (1978) trained preschoolers to evaluate their work (e.g., tracing lines and letters) and to recruit teacher praise with a hand raise and a verbal statement such as “How is this?”

Prior to training, the preschoolers received a mean of 1.0 teacher praise statements per 10-minute session. After training, praise statements from teachers increased to a mean of 4.4 per session.

Other recruiting research has documented increased appropriate attention-seeking behaviors and increased praise from adults for: a) preschoolers with developmental delays learning to stay on task during transitions (Connell, Carta, & Baer, 1993); b) elementary and middle school students learning academic tasks (Alber, Heward, & Hippler, 1999; Craft, Alber, & Heward, 1998; Hrydowy, Stokes, Martin, 1984; Morgan, Young, & Goldstein, 1983); c) elementary boys with autism learning functional skills (Harchik, Harchik, Luce & Sherman, 1990); d) adolescent girls in a maximum security institution learning vocational skills (Seymour & Stokes, 1976); and e) high school students with mental retardation learning vocational skills (Mank & Horner, 1987).

Research has also documented a functional relationship between recruitment training and increased academic proficiency (Alber et al., 1999; Craft et al., 1998; Wolford, Heward, & Alber, 2002). For example, Craft et al. (1998) taught fourth graders with developmental disabilities to show their spelling assignments to the teacher two to three times per work page and request feedback or assistance (e.g., “How am I doing?”). Before the students were taught to recruit attention, the mean percentage of spelling worksheet items completed accurately for each student ranged from 25% to 67% and increased to a mean of 67% to 97% after training.

The research of Alber et al. (1999) supported and extended the results of Craft et al. (1998) to sixth graders with learning disabilities. In addition to increased praise and feedback, students also attained significant increases on the completion and accuracy of their math assignments. During baseline, the mean percentage of math items completed accurately for each student ranged from 51% to 71%, and after training, increased to a mean range of 72% to 91%.

We found only one recruiting study in which student participants were diagnosed with behavior disorders. Morgan, Young, and Goldstein (1983) taught three 10-12 year old boys with EBD to prompt their teacher’s help, praise the teacher after receiving help, prompt the teacher for approval, and thank the teacher. The students were systematically provided with feedback, and rewarded with social praise and access to special activities. During 30-min observation sessions, all three students received increased teacher praise (mean frequency 0.4 to 1.9 in baseline; 1.3 to 3.0 after training). Although this study

demonstrated the positive social effects of recruitment training, no data were reported on the students' academic performance.

This study was designed to extend previous recruiting research examining academic proficiency to a new subject population, fourth, fifth, and sixth graders with EBD attending a day treatment facility in Mississippi. We addressed the following research questions. What are the effects of training students with behavior disorders to recruit positive teacher attention on the number of appropriate and inappropriate recruiting responses they emit during independent work sessions, and on the completion and accuracy of independent math assignments?

Method

Students. Four students (fourth through sixth graders) with EBD attending a day-treatment facility participated in this study. The students enrolled in this program were being treated for severe behavior problems. Typical inappropriate behaviors exhibited daily by the participants included screaming, using profanity, throwing objects, refusing to comply with directions, and refusing to engage in and complete class work. Additionally, the students' exhibited considerable deficits in their core academic subjects (i.e., reading, language arts, and mathematics). These students were selected to participate because, as reported by their teacher, they recruited adult attention very frequently and inappropriately. Table 1 shows academic and school related information for each student. This study began after the researchers received permission from the University of Southern Mississippi's Human Subjects Review Board.

Table 1. Student Information

<u>Student</u>	<u>Gender</u>	<u>Age</u>	<u>Ethnicity</u>	<u>IQ^a</u>	<u>Math Achievement^b</u>	<u>Diagnosis</u>	<u>Time in Day Treatment</u>
Zoe	F	10	Af. Amer.	85	3.9	Bipolar, with psychotic episodes	12 months
Trevor	M	12	Caucasian	83	4.7	ADHD Combined Type; Intermittent Explosive D/O; Conduct D/O	17 months
Mike	M	13	Caucasian	86	5.5	Bipolar, Manic; ADHD Combined Type; Disruptive Behavior D/O	19 months

Dexter	M	13	Af. Amer.	79	5.4	ADHD Combined Type; Depression	4 months
--------	---	----	-----------	----	-----	---	----------

Notes: a = IQ score on KAIT

b = Grade level achievement on PIAT-R

Setting. The students participating in this study received academic instruction (language arts, reading, math) in a self-contained classroom for 3 hours daily during the morning, and counseling services for 3 hours daily during the afternoon. Teacher directed math instruction took place from 11:00 to 11:30, followed by independent math seatwork from 11:30 to 11:50. During seatwork time, the students were expected to complete a math assignment independently and recruit the teacher's attention when they needed help or feedback. The typical and expected procedure for obtaining teacher assistance was for students to raise their hands and wait to be recognized by the teacher. Data on recruiting responses and math performance were collected in the classroom during independent seatwork at 11:30 to 11:50 daily. In addition to the four student participants, 6 other students were present in the classroom during data collection. Recruitment training was conducted in the same classroom between 8:00 and 8:30 for two to seven sessions for each student.

Research Team. The research team consisted of the classroom teacher, a university professor, and two graduate students. The classroom teacher earned her bachelor's degree in special education and was enrolled in a master's degree program. At the time of the study, she had 2 years of teaching experience. The teacher conducted all recruitment training, and provided students with feedback and rewards for appropriate recruiting.

The university professor was the primary data collector. She was present each day from 11:30 to 11:50 to observe and record appropriate and inappropriate recruiting responses for each of the four students. The graduate students were present for approximately one day each week to observe and record recruiting responses for the purpose of assessing interobserver agreement (IOA) and procedural reliability.

Dependent Variables

Appropriate recruiting. An appropriate recruiting response was recorded each time a student emitted all three of the following behaviors in the sequence: (a) raised his or her hand; (b) waited quietly until the teacher recognized him or her either verbally (e.g., "I'll be right there.") or moving to the student's desk; and (c) voiced a question or statement to the teacher about his or her academic work (e.g., "Did I do this right?" "How am I doing?" "I don't understand this one.") when the teacher was within a proximity of 3 feet of the student. Recruiting responses that followed the above sequence, but were not academic (e.g., "May I sharpen my pencil?" "I need to get something out of my locker.") were not recorded.

An appropriate recruiting episode began when the teacher spoke to the student after an appropriate signal and ended when the teacher walked away from the student. The entire student-teacher interaction—beginning with the student's hand raise and ending with the teacher moving away from the student—counted as one recruiting response, even if the student asked more than one question once the teacher was within the 3-foot proximity of the student. If the student raised his hand and then put it down without being recognized by the teacher, a recruiting response was not recorded.

Inappropriate recruiting. An inappropriate recruiting response was recorded if a student:

- called out without raising his or hand.
- raised his hand, but called out before the teacher was within 3-feet of him.
- got out of his seat to talk to the teacher.
- made negative comments or complained to the teacher (e.g., "I hate this work.").
- made no verbal response once the teacher arrived (e.g., pointed to his paper).

An inappropriate recruiting response was not recorded if the student:

- spoke to another student.
- got out of his seat, but did not attempt to get the teacher's attention (e.g., got up to put the completed assignment in the basket).

Completion of math assignments. Each session, following whole class math instruction, the teacher assigned a math worksheet for students to complete. The math work sheets consisted of approximately 10 to 15 questions or problems, and were designed so that students could practice the skills covered during whole class instruction. Math instruction was 4th grade level, and, at the time of the study, consisted of concepts such as fractions, ratios, decimals, percentages, measurement conversions, and estimation. Each week, the students were provided with instruction and practice with a new skill. The percentage of work completed by each student was calculated by dividing the number of items answered by the total number of items assigned and multiplying by 100.

Accuracy of completed work. The teacher used an answer key to determine the items on the worksheets answered correctly and incorrectly. Accuracy was calculated by dividing the number of items answered correctly by the total number of items attempted and multiplying by 100.

Social validity. On the last day of data collection, the teacher interviewed the students individually to determine their opinions of the recruiting project. She recorded their responses to the following questions that she developed: What did you think about this project? What did you like? What did you dislike? Do you feel like it helped you (grades, learning, behavior)? What made you keep going?

Procedures to Enhance and Assess Believability of Data

Assessment of Interobserver Agreement. The second observer was present for 12 (27%) of the study's 45 sessions. The primary and secondary observer independently and

simultaneously recorded the number of appropriate and inappropriate recruiting responses. Interobserver agreement (IOA) was calculated on an episode-by-episode basis by dividing the number of agreements plus disagreements and multiplying by 100. IOA data for each student for appropriate and inappropriate recruiting responses were as follows: Zoe, 100%; Trevor, 97%; Mike, 100%; and Dexter, 98%.

IOA was also assessed for completion and accuracy of math assignments. A second observer independently scored each student's work for 12 (20%) of the 59 math assignments. IOA was 100% for all students.

Treatment Integrity for Recruitment Training. The teacher conducted a total of 17 training session (7 for Zoe, 2 for Trevor, 5 for Mike, and 3 for Dexter). An observer (another teacher) was present for 6 (35%) of the 17 training sessions to assess treatment integrity. The observer used a checklist to observe and record implementation of the training protocol. The teacher referred to her own copy of the checklist as a guide during each training session. Treatment integrity results indicated that the teacher conducted 100% of the 22 training steps in the correct sequence for each session.

Treatment Integrity of Teacher Responses to Recruiting. The research team developed systematic procedures for the teacher to implement when responding to each type of recruiting attempt (see *Procedures*). During 18 (31%) of the 59 data collection sessions, an observer recorded treatment integrity for teacher responses to student recruiting. A recruiting episode was counted as correct if the teacher followed all procedures in sequence. An episode was counted as incorrect if any procedures were omitted, performed incorrectly, or performed out of sequence. Treatment integrity was calculated by dividing the number of correct episodes by the total number of recruiting episodes and multiplying by 100%. Mean treatment integrity for this variable across all 18 sessions was 98%.

Observers. The students were told that the observers were present to watch how the teacher taught math, so we assumed the students were unaware they were being recorded. Prior to the beginning of data collection, the primary and secondary observers independently and simultaneously observed and recorded student-recruiting data for 5 sessions. Data collection began when the observers attained 100% IOA for 3 consecutive sessions for each student. To minimize observer bias, the secondary observer was not told when recruitment training began for any of the students, the order in which the students were trained, or when any subsequent changes in experimental conditions occurred for each student.

Experimental Design

A multiple baseline across students design (Cooper, Heron, & Heward, 1987) was used to analyze the effects of recruitment training on the frequency of appropriate and inappropriate recruiting responses, and on math productivity. The four experimental conditions were baseline, training, self-recording, and maintenance.

Baseline

Students were observed in math class while working independently on assigned worksheets. If a student recruited appropriately, the teacher went to the student's desk, provided assistance, feedback, or praise; then thanked the student for raising his or her hand. If a student recruited inappropriately, the teacher went to the student's desk and provided assistance or feedback (including praise for correct academic responses). According to the teacher, this was the procedure in place prior to the beginning of the study. She stated that if she responded to inappropriate recruiting by ignoring or reprimanding the students, they either emitted more disruptive behaviors or refused to do their work.

Recruitment Training

Recruitment training was conducted individually with each student in the morning between 8:00 and 8:20. During this time, an assistant worked with the rest of the students in the classroom on other activities. Training consisted of a protocol adapted from Craft et al. (1998) and Alber et al. (1999); and included the following steps: providing a rationale for appropriate recruiting, modeling and role playing, and self-recording.

During each training session, the classroom teacher began with a "what if...?" short story to encourage student discussion. For example, "What if you were learning how to do something new in math today? The teacher shows you how to do it on the board, and then you even get to come up to the board and do a problem yourself, and explain how you did the problem to the rest of the class. Then you got to your seat, picked up the worksheet full of these new types of problems for you to complete, and you completely forget how to do it? What would you do?" Student responses were solicited and discussed. Then the rationale for appropriately recruiting teacher attention was presented. The rationale included such benefits as learning more, making better grades, getting more work done, and getting more help and praise from the teacher.

Next, the teacher presented the recruiting sequence verbally and on the chalkboard. The recruiting steps were as follows: raise your hand, wait quietly, and speak in a normal tone of voice. The teacher explained and modeled each step, and presented examples and non-examples of correct performance for each step. The students verbally repeated the steps to the teacher, and the teacher provided praise and corrective feedback. The teacher gave the students an opportunity to practice the procedure through role-play. After the student appropriately role-played the steps, the teacher gave the student a self-recording form to mark each appropriate and inappropriate recruiting response per session. The self-recording form listed the three steps for appropriate recruiting, and provided boxes for the student to check whether or not they followed the three steps.

Finally, the teacher discussed with the students when and how often to recruit. She stated that students should recruit during math class at least three times and no more than five times, and that the students will be able to keep track of how many times they recruit by marking their self-recording sheet. The teacher discussed with students that they should recruit if they don't understand the directions or if they get stuck on a problem. They were also told to recruit after they finish a few problems so the teacher

can check them for accuracy, and recruit again after they finish the assignment.

During the training phase, data were collected during math class. If the students recruited appropriately at least 3 times and recruited inappropriately 1 time or less for 2 consecutive sessions, training was discontinued.

Teacher responses to appropriate recruiting. If the student recruited appropriately, the teacher went to the student, provided assistance or feedback, and provided praise for appropriate recruiting. Next, the teacher said, “Mark your sheet.” (self-recording form). The teacher then drew a smiley face next to the student’s mark to indicate that she agreed. If the student did not know whether or not he or she recruited appropriately, the teacher said, “Did you follow the steps?” If student still did not know, she would say, “Yes, you did. You raised your hand, waited quietly, and spoke in a normal voice. Mark your sheet.”

Teacher responses to inappropriate recruiting. If a student recruited inappropriately, the teacher went to the student and provided assistance or feedback. Then she said, “Did you follow the steps?” If the student said “no,” the teacher said, “Mark your sheet.” She then wrote a check next to the student’s mark to indicate that she agreed, and prompted the student to follow the steps next time. If the student said “yes,” the teacher provided corrective feedback (e.g., “You raised your hand, but you didn’t wait until I got here before you started talking.”). Then she prompted the student mark the sheet, wrote a check next to the student’s mark to indicate she agreed, and prompted the student to follow the steps next time. All teacher responses to inappropriate recruiting were delivered in a neutral manner.

Token Reinforcers. Prior to the beginning of the study, a school wide reward system was in place in which students were given play money that could be used to buy items (e.g., pencils, candy, toys) from the school store each Friday. Teachers awarded students with the play money at their discretion for any positive behavior they were trying to increase. The students in this study were given one play dollar for every appropriate recruiting response emitted, but no more than four dollars total (e.g., if the student recruited five times appropriately, he or she was only given four dollars). The play money was delivered privately to each student immediately following math class. Upon delivery of the play money, the teacher praised the student for meeting the criteria of 3 to 5 appropriate recruiting responses. Corrective feedback was given when more than one inappropriate recruiting response occurred.

Self-Recording

The self-recording condition was divided into three phases: continuous reinforcement, intermittent reinforcement, and no reinforcement.

Continuous reinforcement. The teacher continued to implement the procedures used during the training phase, the only difference was that the students did not meet with the teacher for the morning training sessions. Play money was delivered to the students after each session in which students emitted appropriate recruiting responses.

Intermittent reinforcement. During the intermittent reinforcement part of generalization-programming phase, instead of the students receiving play money, they drew a slip of paper out of bag that indicated whether or not they received the play money that day. “Show me the money” was printed on some slips of paper, and “show me a smile” was printed on others. During the first two weeks of intermittent reinforcement, “show me the money” was printed on three slips of paper, and “show me a smile” was printed on two slips of paper. So, during the first two weeks of intermittent reinforcement, students were rewarded with play money on three unpredictable days. The following two weeks, students were rewarded with play money on two unpredictable days.

No reinforcement. At the end of the self-recording phase, the students no longer drew slips of paper out of the bag, but they continued to self-record their appropriate recruiting and receive teacher praise for meeting the criterion-recruiting rate.

Maintenance

During the maintenance phase, the self-recording forms were terminated, and the teacher responded to appropriate and inappropriate recruiting as described in the baseline condition.

Results

Recruiting Responses

Figure 1 shows the number of appropriate and inappropriate recruiting responses per 20-min session for each student, and Figure 2 show the mean number of appropriate and inappropriate recruiting responses for each student in each condition. Prior to recruitment training all four students had high and variable rates of inappropriate recruiting and low rates of appropriate recruiting. In baseline, the mean number of inappropriate recruiting responses per session ranged from 3.3 (Trevor) to 4.8 (Zoe and Dexter) while the mean number of appropriate recruiting responses ranged from 0.3 (Mike) to 0.8 (Dexter). In the self-recording condition, all four students met the target criteria of 3 to 5 appropriate recruiting responses per session. The mean number of appropriate recruiting responses ranged from 3.0 (Trevor) to 4.2 (Zoe), and the mean number of inappropriate recruiting responses was 0.5 or less for all four students.

See Figure on Next Page

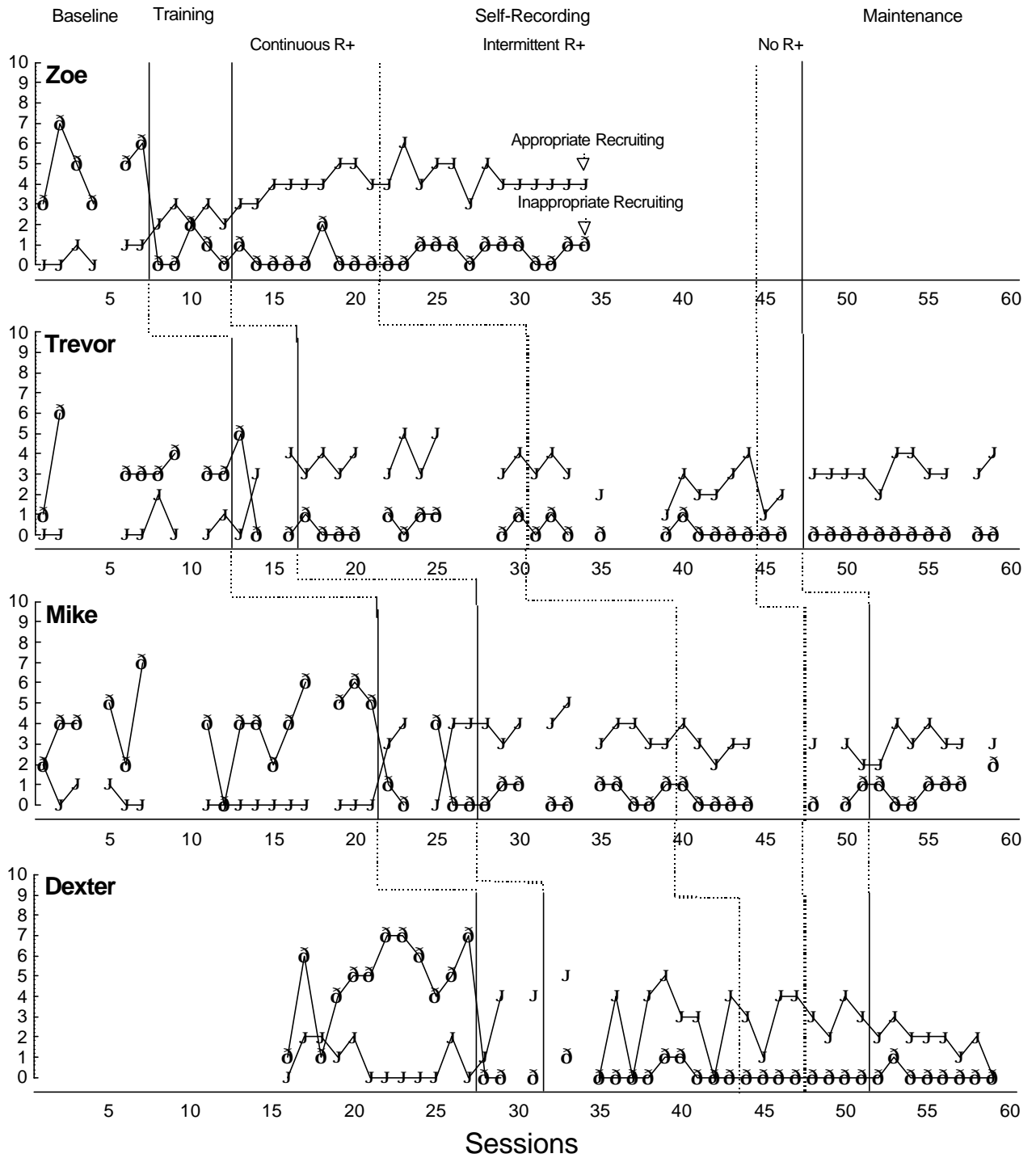


Figure 1. Number of appropriate and inappropriate recruiting responses per 20-minute session.

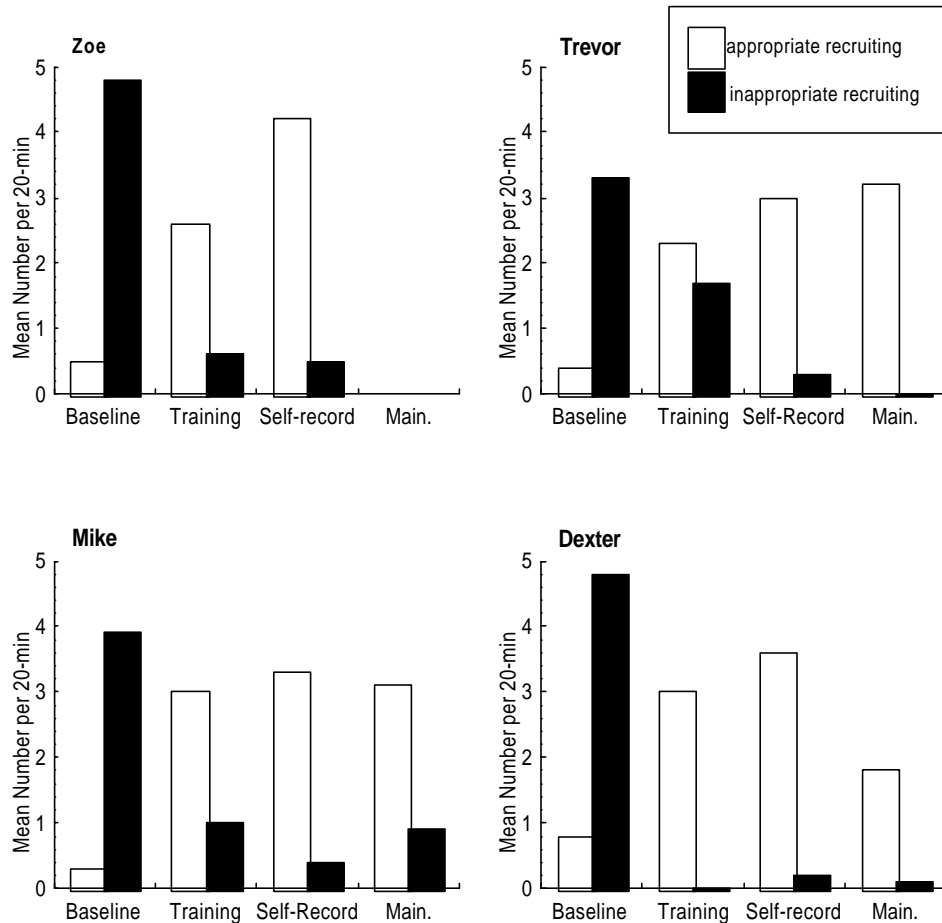


Figure 2. Mean number of appropriate and inappropriate recruiting responses for each student in each condition.

During maintenance, Trevor continued to appropriately recruit at the target rate with no incidences of inappropriate recruiting for 11 sessions. Mike continued to appropriately recruit at the target rate, but his inappropriate recruiting gradually increased across 7 maintenance sessions. Dexter's appropriate recruiting fell below the target number, but his inappropriate recruiting remained at zero for 7 of the 8 maintenance sessions. We were unable to assess maintenance on Zoe because she was removed from day treatment after the 35th session.

Math Assignments. Table 2 shows the mean percentage of worksheet items completed and mean percent accuracy of completed items for all four students during each condition of the study. For Zoe and Trevor, work completion and accuracy continued to improve after recruitment training. Zoe's work completion increased from 64% in baseline to 84% in self-recording, and her accuracy increased from 44% to 83%. The effects of recruitment training on Trevor's work completion were even more dramatic. His mean percent work completion began at 10% in baseline and increased to 62% in self-recording and 73% in maintenance. His accuracy increased from 67% in baseline to 85%-87% in self-recording and maintenance. The data for Mike and Dexter

followed a different pattern. Mike work completion ceiling of 100% remained about the same, but his accuracy improved. Dexter's accuracy also improved while his work completion decreased.

Social validity. The teacher interviewed Trevor, Mike, and Dexter on the last day of data collection to assess their opinions. We were unable to obtain social validity data for Zoe because she was removed from the facility in the middle of the study. All three boys stated that they liked recruiting and thought it helped them. Mike added, "when you made me go back and think, I figured out how to fix the problem," and "it helped me be more patient." Dexter stated, "The money helped me get started. The steps helped me remember to wait quietly," but he said, "sometimes my hand got tired." Trevor said, "It helped me learn that if I raise my hand I get a lot more help, I liked getting your help."

Table 2. Percent complete and accuracy of completed items.

	<u>Baseline</u>		<u>Training</u>		<u>Self-Recording</u>		<u>Maintenance</u>	
Student	<u>Completion</u> <u>Accuracy</u>		<u>Completion</u> <u>Accuracy</u>		<u>Completion</u> <u>Accuracy</u>		<u>Completion</u> <u>Accuracy</u>	
Zoe	64	44	74	83	84	83	NA	NA
Trevor	10	67	38	80	62	85	73	87
Mike	100	56	100	90	98	91	100	85
Dexter	92	63	59	60	38	78	51	79

Discussion

The results of this study support the findings of previous research demonstrating that children with disabilities can be taught to recruit positive attention from significant others (e.g., Alber et al., 1999; Connell et al., 1993; Craft et al., 1998; Harchik et al., 1990; Wolford et al., 2002), and extends this research to students with EBD attending a day treatment facility. This investigation provides evidence of a functional relationship of recruitment training on the decrease of inappropriate recruiting and on the increase of appropriate recruiting. The students recruited inappropriately on 41 of the 42 total baseline sessions, and recruited appropriately on only 11 of those sessions. After training, students recruited inappropriately one time or less during 104 of the 106 sessions in the self-recording and maintenance phase. All four students appropriately recruited within the target range of three to five recruiting responses per session on 81 of the 106 self-recording and maintenance sessions. This study demonstrates that students with EBD can be taught to increase positive and decrease negative interactions with teachers while receiving feedback for academic tasks.

On the variable of academic performance, recruitment training demonstrated positive effects for all four students. Zoe and Trevor showed substantial increases in both completion and accuracy of independent math assignments after the training phase. Although, Mike and Trevor did not show increased work completion, they made substantial gains in accuracy. One probable explanation for this result is that prior to recruitment training Mike and Dexter completed more of their work, but because they were rarely recruiting appropriate teacher feedback, they had higher percentages of incorrect responses. After training, their accuracy improved as a function of receiving more individual academic instruction from the teacher. The academic results of this investigation support and extend the research of Alber et al. (1999), Craft et al. (1998), and Wolford et al. (2002). However, these results should be interpreted with caution. Because the teacher wanted to prevent disruption, she provided academic assistance whether the students recruited appropriately or not. So, it is possible that the academic gains may have been the result of the normal course of instruction.

Social validity results indicated students liked recruitment training and felt that it helped them academically. These results are consistent with previous recruiting research (e.g., Craft et al., 1998; Alber et al., 1999). However, these data should be interpreted with caution because the teacher conducted the interview, and the students may have responded positively in order to please her.

Limitations and future research. Students in this study were trained to recruit teacher attention in a self-contained classroom in a day treatment facility, and their academic productivity was only assessed during independent math seatwork. In order to produce maximum benefits, recruiting skills must generalize to a wide range of settings, significant others, and types of tasks. Assessing generalization in other settings and situations will greatly enhance future recruiting research.

A major limitation of this research and all of the recruiting research to date is the limited duration of the maintenance phase. In this study, we were only able to assess maintenance on 7 to 11 sessions because the school year had ended. We were unable to obtain any maintenance data for Zoe because she was removed from day treatment. The limited duration of the maintenance phase precludes us from drawing conclusions about the extent to which students will continue to recruit independently. Future research will be strengthened with longer maintenance phases and generalization to other settings.

Implications for classroom practice. Students with EBD tend to have two persistent interrelated problems, negative relationships with teachers and deficient academic performance. These two problems interfere with the ability to function and attain success in normalized settings. Teaching students to recruit positive attention can improve teacher-student relationships and reverse the pattern of negativity. Teachers may be willing to spend more instructional time working with students when they are polite and receptive to feedback. Additionally, teachers will be able to devote more time to instruction when they spend less time managing behavior. Fortunately, recruitment training is a relatively low-cost, low-effort intervention. The students in this study only needed two to seven 20-minute training sessions to become proficient.

In addition to the benefits of increased academic performance and positive interactions, recruitment training also has implications for increasing independent functioning. Teaching students to appropriately recruit attention gives them control over their own learning. Students are taught to make decisions about when they need help and how to obtain it, and the self-recording form enables them to monitor their performance. Additionally, students may realize they have control over the quality of attention they receive. Each of these benefits contributes to the ultimate goal of special education, enabling students to function as independently as possible in normalized settings.

References

- Alber, S. R., Heward, W. L., & Hippler, B. J. (1999). Teaching middle school students with learning disabilities to recruit positive teacher attention. *Exceptional Children*, 65, 253-270.
- Blackorby, J., & Wagner, M. (1996). Longitudinal post school outcomes of youth with disabilities: Findings from the national longitudinal transition study. *Exceptional Children*, 62, 399-414.
- Connell, M. C., Carta, J. J., & Baer, D. M. (1993). Programming generalization of in-class transition skills: Teaching preschoolers with developmental delays to self-assess and recruit contingent teacher praise. *Journal of Applied Behavior Analysis*, 26, 345-352.
- Craft, M. A., Alber, S. R., & Heward, W. L. (1998). Teaching elementary students with developmental disabilities to recruit teacher attention in a general education classroom: Effects on teacher praise and academic productivity. *Journal of Applied Behavior Analysis*, 31, 399-415.
- Frank, A. R., Sitlington, P. L., & Carson, R. R. (1995). Young adults with behavioral disorders: A comparison with peers with mild disabilities. *Journal of Emotional and Behavioral Disorders*, 3, 156-164.
- Harchik, A. E., Harchik, A. J., Luce, S. C., & Sherman, J. A. (1990). Teaching autistic and severely handicapped children to recruit praise: Acquisition and generalization. *Research in Developmental Disabilities*, 11, 77-95.
- Hrydowy, E. R., Stokes, T. F., & Martin, G. L. (1984). Training elementary students to prompt teacher praise. *Education and Treatment of Children*, 7, 99-108.
- Jack, S. L., Shores, R. E., Denny, R. K., Gunter, P. L., DeBriere, T., & DePaepe, P. (1996). An analysis of the relationships of teachers' reported use of classroom interactions on types of interactions. *Journal of Behavioral Education*, 6, 67-87.
- Landrum, T. J., Tankersley, M., & Kauffman, J. M. (2003). What is special about special education for students with emotional or behavioral disorders. *Journal of Special Education*, 37, 148-157.
- Levy, S., & Chard, D. J. (2001). Research on reading instruction for students with emotional and behavioral disorders. *Journal of Disability, Development and Education*, 48, 429-444.

- Mank, D. M., & Horner, R. H. (1987). Self-recruited feedback: A cost-effective procedure for maintaining behavior. *Research in Developmental Disabilities*, 8, 91-112.
- Morgan, D., Young, K. R., Goldstein, S. (1983). Teaching behaviorally disordered students to increase teacher attention and praise in mainstreamed classrooms. *Behavioral Disorders*, 8, 265-273.
- Seymour, F. W., & Stokes, T. F. (1976). Self-recording in training girls to increase work and evoke staff praise in an institution for offenders. *Journal of Applied Behavior Analysis*, 9, 41-54.
- Stokes, T. F., Fowler, S. A., & Baer, D. M. (1978). Training preschool children to recruit natural communities of reinforcement. *Journal of Applied Behavior Analysis*, 11, 285-303.
- Sutherland, K. S., Adler, N. & Gunter, P. L. (2000). The effect of varying rates of opportunities to respond to academic requests on the classroom behavior of students with EBD. *Journal of Emotional and Behavioral Disorders*, 11, 239-248.
- Trout, A. L., Nordness, P. D., Pierce, C. D., & Epstein, M. H. (2003). Research on the academic status of children with emotional and behavioral disorders. *Journal of Emotional and Behavioral Disorders*, 11, 198-210.
- Wehby, J. H., Lane, K. L., & Falk, K. B. (2003). Academic instruction for students with emotional and behavioral disorders. *Journal of Emotional and Behavioral Disorders*, 11, 194-197.
- Wehby, J. H., Symons, F., & Shores, R. E. (1995). A descriptive analysis of aggressive behavior in classrooms for students with emotional and behavioral disorders. *Behavior Disorders*, 20, 87-105.
- Wolford, P. L., Alber, S. R., & Heward, W. L. (2002). Teaching middle school students with learning disabilities to recruit peer assistance during cooperative learning group activities. *Learning Disabilities Research and Practice*, 16, 161-173.

Author Information: Please address correspondence to
Sheila R. Alber
The University of Southern Mississippi
Department of Curriculum, Instruction, and Special Education
Box 5115
Hattiesburg, MS 39406
Phone: 601-266-6636
Fax: 601-266-4548
E-mail: Sheila.Alber@usm.edu